

EDUCATION

University of Illinois at Urbana-Champaign

Urbana, IL

Masters degree in Computer Science (GPA: 4/4) with specialization in Artificial Intelligence

Aug '19 - Dec '20

- **Coursework:** Computer Vision, Advanced Information Retrieval, Machine Learning in NLP, Autonomous Vehicles, UI Design
- **Teaching Experience:** Natural Language Processing, Discrete Structures

Birla Institute of Technology and Science (BITS), Pilani

Hyderabad, India

Bachelor of Engineering (Hons.) in Computer Science (GPA: 9.72/10)

Aug '15 - May '19

EXPERIENCE

Amazon Web Services (AWS)

Greater Seattle Area, WA

Software Development Engineer Intern

May '20 - Aug '20

- Deployed **Java APIs** to **AWS** cloud for providing preview of tasks to be performed by technicians in Amazon data centers
- Analyzed complex BPMN Workflows extracted from **Amazon Dynamo DB** to identify expected order of task execution
- Tested code with Unit, Integration and Load testing using **JUnit**, **Mockito**, and **TestNG**

University of Illinois at Urbana-Champaign

Urbana, IL

Research Assistant with Prof. Kevin Chang

Aug '19 - May '20

- Experimented a **Visual Attention-based** Model in **PyTorch** for novel Webpage Object Detection formulation
- Utilized contextual information using visual features of ordered web elements extracted using **Resnet18**
- Created largest public labeled dataset of 7.7k product webpage screenshots
- Achieved **95% accuracy** for product Price detection (8.5% above Fast R-CNN) and interpreted Attention Visualizations

Microsoft Research

Bengaluru, India

Research Intern

Jan '19 - Jul '19

- Implemented **Graph RNNs** in **TensorFlow** to Learn Embeddings for **300k** entities in a heterogeneous graph
- Collaborated with a **team of 10** to design a novel Deep Neural Net architecture for **recommending messages** in MSTeams
- Outperformed Graph Convolutional Networks on **5** benchmark datasets for rating prediction and ranking tasks

BITS Pilani

Hyderabad, India

Research Assistant

Jan '18 - Dec '18

- Analyzed **Twitter** Stream for **Event Detection** and achieved a **precision of 88.1%** (absolute improvement of 8%)
- Segmented tweets and hash-tags; applied Jarvis-Patrick clustering; summarized newsworthy events

PUBLICATIONS

Morabia, K., Bhanu Murthy, N. L., Malapati, A., & Samant, S. (2019, June). **SEDTWik: Segmentation-based Event Detection from Tweets using Wikipedia**. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL**): Student Research Workshop (pp. 77-85) [**Paper**] [**Code**]

PROJECT HIGHLIGHTS

Building an Autonomous Vehicle

Sep '20 - Nov '20

- Collaborated in a **team of 6** to control a Polaris GEM e2 Autonomous Vehicle containing a LiDAR, Radar, and camera
- Programmed WASD keyboard keys to accelerate and steer vehicle using a PID controller and ROS Python commands
- Deployed pre-trained **YOLOv3** to stop vehicle on detecting a pedestrian

Attention-based Joint Detection of Object and Semantic Part [arXiv:2007.02419] [Code]

Feb '20 - May '20

- Implemented a **PyTorch** model for simultaneous Object and Part detection by combining 2 **Faster-RCNN** models
- Applied a novel **Attention-based feature fusion** to learn enhanced representation for Object and Part proposals
- Improved mean Average Precision for Objects and Parts on PASCAL-Part dataset

SKILLS

- **Programming:** Python, Java, C, C++, LaTeX, SQL, HTML, CSS, JavaScript
- **Other Technologies:** PyTorch, TensorFlow, AWS, Scikit-learn, GIT, Flutter, Android Studio, JUnit, Mockito

LEADERSHIP AND HONORS

- Awarded **Merit Scholarship (Top 1%** out of 700 students at BITS Pilani, Hyderabad) Aug '15 - May '19
 - Organized cultural dance events as **President** of 150-membered Gujarati Association - BITS Pilani, Jul '17 - May '18
- Hyderabad; attended by over 1000 students; raised INR 30k fund